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EXAMINER

GARG, YOGESH C

ART UNIT PAPER NUMBER

3625

DATE MAILED: 09/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/867,174

Applicant(s)

SCHEER, ROBERT H.

Examiner

Yogesh C Garg

Art Unit

3625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 May 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-200 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/30/2001.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

1.1. Claimed Invention(s) does not fall within the Technological Art.

As an initial matter, the United States Constitution under Art. I, §8, cl. 8 gave Congress the power to "[p]romote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries". In carrying out this power, Congress authorized under 35 U.S.C. §101 a grant of a patent to "[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition or matter, or any new and useful improvement thereof." Therefore, a fundamental premise is that a patent is a statutorily created vehicle for Congress to confer an exclusive right to the inventors for "inventions" that promote the progress of "science and the useful arts". The phrase "technological arts" has been created and used by the courts to offer another view of the term "useful arts". See *In re Musgrave*, 167 USPQ (BNA) 280 (CCPA 1970). Hence, the first test of whether an invention is eligible for a patent is to determine if the invention is within the "technological arts".

Further, despite the express language of §101, several judicially created exceptions have been established to exclude certain subject matter as being patentable subject matter covered by §101. These exceptions include "laws of nature", "natural phenomena", and "abstract ideas". See *Diamond v. Diehr*, 450, U.S. 175, 185, 209 USPQ (BNA) 1, 7 (1981). However, courts have found that even if an invention incorporates abstract ideas, such as mathematical algorithms, the invention may nevertheless be statutory subject matter if the invention as a whole produces a "useful, concrete and tangible result." See *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* 149 F.3d 1368, 1973, 47 USPQ2d (BNA) 1596 (Fed. Cir. 1998).

This "two prong" test was evident when the Court of Customs and Patent Appeals (CCPA) decided an appeal from the Board of Patent Appeals and Interferences (BPAI). See *In re Toma*, 197 USPQ (BNA) 852 (CCP 1973). In *Toma*, the court held that the recited mathematical algorithm did not render the claim as a whole non-statutory using the Freeman-Walter-Abele test as applied to *Gottschalk v. Benson*, 409 U.S. 63, 175 USPQ (BNA) 673 (1972). Additionally, the court decided separately on the issue of the "technological arts". The court developed a "technological arts" analysis:

The "technological" or "useful" arts inquiry must focus on whether the claimed subject matter...is statutory, not on whether the product of the claimed subject matter...is statutory, not on whether the prior art which the claimed subject matter purports to replace...is statutory, and not on whether the claimed subject matter is presently perceived to be an improvement over the prior art, e.g., whether it "enhances" the operation of a machine. *In re Toma* at 857.

In *Toma*, the claimed invention was a computer program for translating a source human language (e.g., Russian) into a target human language (e.g., English). The court found that the claimed computer implemented process was within the

Art Unit: 3625

"technological art" because the claimed invention was an operation being performed by a computer within a computer.

The decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* never addressed this prong of the test. In *State Street Bank & Trust Co.*, the court found that the "mathematical exception" using the Freeman-Walter-Abele test has little, if any, application to determining the presence of statutory subject matter but rather, statutory subject matter should be based on whether the operation produces a "useful, concrete and tangible result". See *State Street Bank & Trust Co.* at 1374. Furthermore, the court found that there was no "business method exception" since the court decisions that purported to create such exceptions were based on novelty or lack of enablement issues and not on statutory grounds. Therefore, the court held that "[w]hether the patent's claims are too broad to be patentable is not to be judged under §101, but rather under §§102, 103 and 112." See *State Street Bank & Trust Co.* at 1377. Both of these analysis goes towards whether the claimed invention is non-statutory because of the presence of an abstract idea. Indeed, *State Street* abolished the Freeman-Walter-Abele test used in *Toma*. However, ***State Street* never addressed the second part of the analysis, i.e., the "technological arts" test established in *Toma* because the invention in *State Street* (i.e., a computerized system for determining the year-end income, expense, and capital gain or loss for the portfolio) was already determined to be within the technological arts under the *Toma* test. This dichotomy has been recently acknowledged by the Board of Patent Appeals and Interferences (BPAI) in affirming a §101 rejection finding the claimed invention to be non-statutory. See *Ex parte Bowman*, 61 USPQ2d (BNA) 1669 (BdPatApp&Int 2001).**

In the present application, claims 1-10 do not recite connection to the technological arts. None of the manipulative steps indicate any connection to a computer system or technology. The steps of receiving order, constructing, evaluating, selecting fulfillment plans could be performed manually by people. Therefore, the claims are directed towards non-statutory subject matter. To overcome this rejection the Examiner recommends that Applicant amend the claims to better clarify which of the manipulative steps are being performed within the technological arts, such as incorporating/integrating a computer/software/hardware computer network or electronic network functionally with manipulative steps recited in the claims.

2. Examiner cites particular columns and line numbers in the references as applied to the claims below for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent

Art Unit: 3625

granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Shekhar et al. (US Publication number: 2003/0033180 A10; hereinafter, referred to as Shekhar.

Regarding claim 1, Shekhar teaches a method for selecting a fulfillment plan for moving an item within a supply chain (see at least page 2, paragraphs 0028-0034), comprising:

receiving an order for an item (see at least FIG.1, " 110 Order Commitment" and page 2, paragraphs 0033- 0034, " *An order commitment 110, by communicating with master plan 102 ...to ensure accurate commitment responses.....An order fulfillment 120 exchange information*" suggest receiving orders for items;

constructing a list of alternative fulfillment plans for moving the item within the supply chain (see at least page 2, paragraphs 0032- 0034, " *An order fulfillment 120 exchange information with master planning 102. In fulfilling an order based on the plan or plans produced by master planning 102, actions such as buy, make, and move may be taken"*. Note: plans produced by master planning module 102 reads on the claimed limitation);

evaluating the constructed alternative fulfillment plans against a predetermined criteria and selecting for implementation the constructed alternative fulfillment plan that most closely meets the predetermined criteria, the selected

Art Unit: 3625

alternative fulfillment plan being used to position the item for use in meeting the order (see at least pages 4-5, paragraphs 0057-0061, " Once a plan is regenerated a user may want to evaluate it for its " goodness"....FIG.5 shows tools that may be provided to assist user in evaluating results of a plan execution...After repair and review of the plan, a user may publish the plan, for example, to relational database ". Note: As analyzed above the master planning tool kit 102 can generate alternate fulfillment plans and these plans can be evaluated and then after evaluating a plan is finally selected and then published in a database for execution).

Regarding claim 2, Shekhar teaches further using a customer specified level of service when constructing the list of alternative fulfillment plans (see at least page 2, paragraph 0037, " ... *A user may set up rules and strategies to meet his or her business objectives.....* ".

Regarding claim 3, Shekhar teaches further using branch and bound techniques to determine candidate sourcing points for the item when constructing the list of alternative fulfillment plans (see at least page 2, paragraph 0031, " *In FIG. 1, supply is created within the boundaries of some agreed policies and constraints to optimize the plan across all aspects of an organization's supply chain as explained in detail below.....* ".

Regarding claim 4, Shekhar teaches further using a customer specified point of delivery when constructing the list of alternative fulfillment plans (see at least page 3, paragraph 0044, “ *An optimized plan (or a master plan) produced by the present invention may explain how to allocate and coordinate limited resources based upon user-defined strategies that may contain information regarding customer, item, and location prioritization* ”, and page 23, paragraph 0210, “ *When promising and planning supply for customer order, it is sometimes desirable for all of the supply used to meet the demand to come from one, and only one, source location. In one embodiment of the present invention, a user may designate whether the order should have a single source.* ”. Note: the location or source location corresponds to delivery location which is to be considered while constructing the fulfillment plans.).

Regarding claim 5, Shekhar teaches further comprising the step of using a customer specified delivery date when constructing the list of alternative fulfillment plans (see at least page 23, paragraphs 0209-0211, “ *A user may want to specify acceptable delivery dates for an order. ... This delivery date information may be tied to the order line item and/or the order header to ensure that master planning does not contradict the promise.....*”).

Regarding claim 6, Shekhar teaches further comprising the step of using various combinations of sourcing points within the supply chain when constructing the list of alternative fulfillment plans (see at least page 7, paragraph 0082, “*For example, as shown in FIG. 7A, a finished good item may be produced using resources A, B, and C in that order. Master planning may place all the load for a supply order of the item on these resources A, B, C and pass the information to the scheduling system.* ”).

Regarding claim 7, Shekhar teaches further comprising the step of using customer specified consolidation requirements when constructing the list of alternative fulfillment plans (see at least page 7, paragraphs 0083-0085, " *Aggregate SKU Planning* *When planning production of multiple SKUs, there may be a need to group the production of certain SKUs together.An aggregate SKU planning of the present invention is a feature that allows users to plan for item or product families.....* " . Note: Aggregating planning corresponds to consolidating requirements .).

Regarding claim 8, Shekhar teaches further comprising the step of using *activity costs when constructing the list of alternative fulfillment plans* (see at least page 2, paragraph 0036, " *At step 205, planning rules may be created by applying objectives and strategies. Objectives and strategies may be used as a basis to measure critical success factors. Success factors may be based on cost (revenue or margin),* " , and page 3, paragraph-0042, " *At step 330, details of plan performance may be analyzed. At this step, one may take into account such factors as and cash flow performance 334. The cash flow performance 334 (or profit/loss performance) may include factors such as cash-flow-in (e.g., sales revenue, forecasted revenue), cash-flow-out (e.g., operating cost, total purchasing cost),".*).

Regarding claim 9, Shekhar teaches further comprising the step of using inventory age when constructing the list of alternative fulfillment plans (see at least page 4, paragraph 055, " *Master planning may provide a user a workflow to generate a plan. This workflow may include two types of planning processes--a regenerative process and a repair process.*

Art Unit: 3625

..... *On a day-to-day basis, the user may use the repair process to effect certain changes to the plan such as a new inventory update, changes to scheduled supplies, updates to the demands, etc. The output of both the regenerative process and the repair process is a supply plan to meet demands* ". Note: updating the inventory corresponds to considering the inventory age in generating fulfillment plans).

Regarding claim 10, Shekhar teaches further comprising the step of using a customer specified price quote when evaluating the constructed alternative fulfillment plans against a predetermined criteria (see at least page 3, paragraph 0042, "*..At this step one may take into account such factors as delivery performance.....customer orders [e.g., sales revenues.....*". Note: consideration of customer orders correspond to consideration of customer specified price quotes because those orders include prices, delivery conditions, etc.).

Regarding claims 11-20, their limitations are closely parallel to the method steps recited in claims 1-9 and are therefore, analyzed and rejected on the same basis.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

(i) EP 770967A2 to Schmidt et al. teaches A decision support system for the

Art Unit: 3625

management of an agile supply chain that provides an architecture including a server side and a client side (see at least abstract).

(ii) US Patent 6,188,989 to Kennedy (see at least abstract) and US Publication: 2002/0042755 A1 to Kumar et al. (see at least abstract) disclose computer implemented methods for fulfillment of orders in integrated supply chain management systems.

(iii) US Patent, 6,546,303 to Fried et al. (see at least abstract), US Publications: 2002/0016759 A1 to Macready et al. (see at least page, 2, paragraph 0011), and US Publication: 2002/0073114 A1 to Nicastro et al. teach a computerized chain supply management system to fulfill orders.

(iv) US Publication 2004/0143470 A1 to Myrick et al. discloses an Enterprise architecture system which integrates various business and information technology frameworks in support of a business (see abstract)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yogesh C Garg whose telephone number is 703-306-0252. The examiner can normally be reached on M-F (8:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent A Millin can be reached on 703-308-1065. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3625

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Yogesh C Garg
Primary Examiner
Art Unit 3625

YCG
September 2, 2004